Improvement in the detection of snow-covered areas using RGB image composites

Abstracts

NMSC(National Meteorological Satellite Center), KMA(Korea Meteorological Administration) developed the detection skill of the discrimination cloud- and snow-covered areas using RGB image composites to support PyeongChang 2018 Olympic and Paralympic Winter Games. Established skill did not discriminate ice cloud- and snow-covered areas because both areas were displayed in similar cyan colors. This study shows the improvement of the previous skill using image pixel values concerned with RGB image composites. We separated both areas using deviations of pixel values between 1 hour ago and present time. Cloud-covered areas have bigger time variations of pixel values than snow-covered areas because clouds move. We used near infrared 1.6μm (Red), visible 0.8μm (Green), and visible 0.6μm (Blue) bands in Himawari-8 satellite.